

Application note # C-13025

Separation of FAMEs (*cis/trans* Isomers) using the Avantor[®] Hichrom HI-10 Phase

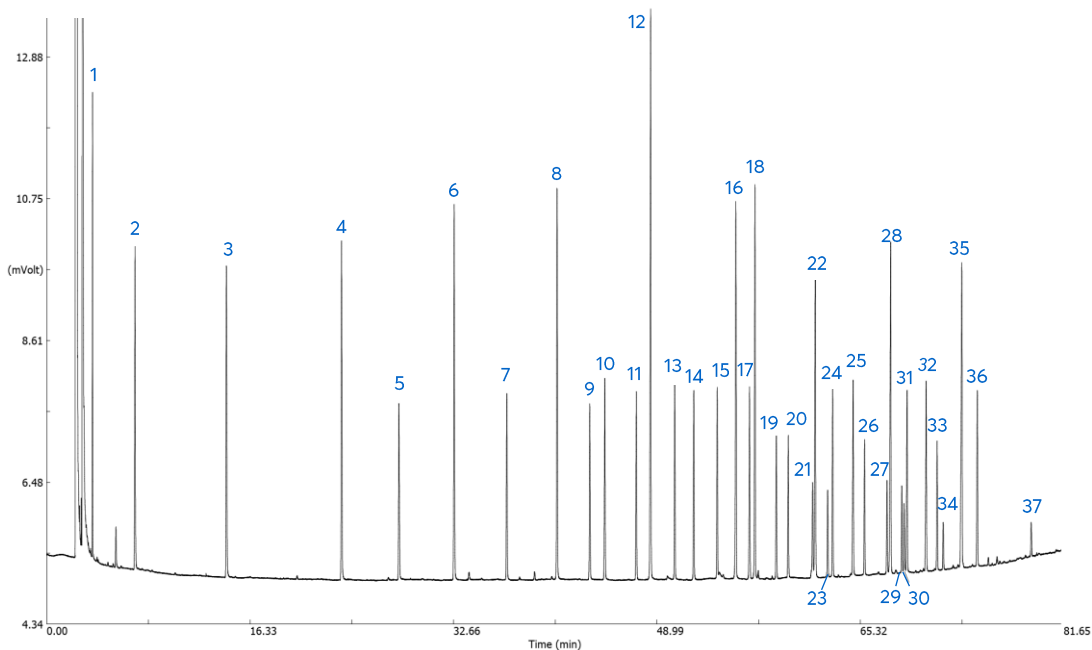


Figure 1: Separation of a mixture of Fatty Acid Methyl Esters (FAMEs) including *cis/trans* isomers, using the Avantor[®] Hichrom HI-10 phase.

Method Details

CONDITIONS

Oven Program:	60 °C (6 min), 2 °C/min, 230 °C
Carrier Gas:	Hydrogen, 100 kPa
Injector:	Split 250 °C, 1 µL, 1:100 split ratio
Detector:	FID, 255 °C

The HI-10 is a high polarity phase with a 100% cyanopropyl polysiloxane composition. It is well suited for the analysis of FAMES, especially for the separation of cis/trans isomers of FAMES.

PEAK IDENTIFICATION

1. 3.68 min – C4:0	14. 51.99 min – C17:0	27. 67.50 min – C20:3n6
2. 7.09 min – C6:0	15. 53.87 min – C17:1	28. 67.79 min – C22:0
3. 14.44 min – C8:0	16. 55.36 min – C18:0	29. 68.69 min – C20:3n3
4. 23.69 min – C10:0	17. 56.42 min – C18:1n9 <i>trans</i>	30. 68.88 min – C20:4n6
5. 28.30 min – C11:0	18. 56.89 min – C18:1n9 <i>cis</i>	31. 69.12 min – C22:1n9
6. 32.73 min – C12:0	19. 58.89 min – C18:2n6 <i>trans</i>	32. 70.65 min – C23:0
7. 36.96 min – C13:0	20. 59.57 min – C18:2n6 <i>cis</i>	33. 71.53 min – C22:2
8. 40.99 min – C14:0	21. 61.53 min – C18:3n6	34. 72.02 min – C20:5n3
9. 43.63 min – C14:1	22. 61.75 min – C20:0	35. 73.52 min – C24:0
10. 44.83 min – C15:0	23. 62.74 min – C18:3n3	36. 74.76 min – C24:1n9
11. 47.36 min – C15:1	24. 63.14 min – C20:1n9	37. 79.08 min – C22:6n3
12. 48.51 min – C16:0	25. 64.78 min – C21:0	
13. 50.45 min – C16:1	26. 65.69 min – C20:2	

ORDERING TABLE

Product	Details	Dimensions	Part Number
Avantor® Hichrom HI-10	GC Column	0.25 mm, 0.25 µm, 50 m	HI26-25-025-50